



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,011	04/21/2004	Raymond Kwong	10052/4502	5983
39683	7590	08/18/2005	EXAMINER	
UNIVERSAL DISPLAY CORPORATION 375 PHILLIPS BLVD. EWING, NJ 08618			YAMNITZKY, MARIE ROSE	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/829,011

Applicant(s)

KWONG ET AL.

Examiner

Marie R. Yamnitzky

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-11, 13-15, 17-28, 39 and 44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-11, 13-15, 17-28, 39 and 44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1774

1. This Office action is in response to applicant's amendment received June 13, 2005, which amends the specification, Figures 3, 4A, 4B, 4C and 4D, and claims 5, 9, 11, 13-15, 17, 28, 39 and 44, and cancels claims 1-4, 12, 16, 29-38 and 40-43.

Claims 5-11, 13-15, 17-28, 39 and 44 are pending.

2. The objection to the drawings, as set forth in the Office action mailed February 10, 2005, is overcome by the Replacement Sheets for Figures 3, 4A, 4B, 4C and 4D received June 13, 2005.

The objection to the disclosure, as set forth in the February 10<sup>th</sup> action, is partly overcome by applicant's amendment. The remaining issue is set forth later in this action.

The rejection under 35 U.S.C. 112, 1<sup>st</sup> paragraph, as set forth in the February 10<sup>th</sup> action, is partly rendered moot by claim cancellation and partly overcome by the June 13<sup>th</sup> amendment. The rejection remains with respect to claims 15 and 28, which are the only pending claims that limit shrinkage, as set forth later in this action.

The rejection under 35 U.S.C. 112, 2<sup>nd</sup> paragraph, as set forth in the February 10<sup>th</sup> action, is partly rendered moot by claim cancellation and otherwise overcome by the June 13<sup>th</sup> amendment.

The rejections under 35 U.S.C. 102(e) and 103(a) based on the published application of Kamatani et al. (US 2003/0068526 A1), the published application of Tsuboyama et al. (US 2003/0068536 A1) and the published application of Brown et al. (US 2004/0086743 A1) are partly rendered moot by claim cancellation and partly overcome by claim amendment. Amended

independent claim 5, with claims 6-11, 13-15 and 17-28 dependent therefrom, contains a combination of limitations previously rejected under 35 U.S.C. 103(a). Applicant's arguments are persuasive with respect to the patentability of claim 5 over these references.

The rejection under 35 U.S.C. 103(a) based on the published application of Grushin et al. (US 2002/0121638 A1) is rendered moot by claim cancellation.

The rejection under 35 U.S.C. 103(a) based on the published application of Kwong et al. (US 6,835,469 B2), and the corresponding rejection for obviousness-type double patenting, are rendered moot by claim cancellation.

3. The disclosure stands objected to because of the following informalities:

The specification only describes one comparative example made with Ir(ppy)<sub>3</sub>, but Figure 3 includes three different sets of data points for Ir(ppy)<sub>3</sub>. It is not clear how the three sets of data points for Ir(ppy)<sub>3</sub> in Figure 3 were obtained.

Appropriate correction/clarification is required.

4. Claims 15 and 28 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for organic light emitting devices having the claimed pixel shrinkage properties wherein the device comprises at least one of Ir(pq)<sub>3</sub>, Ir(3-Mepq)<sub>3</sub>, Ir(Ph-ppy)<sub>3</sub> or Ir(1-piq)<sub>3</sub> as an emissive material, and while being enabling for organic light emitting device of the structure and composition demonstrated by the examples to provide the claimed pixel shrinkage properties, does not reasonably provide enablement for the full scope of the

Art Unit: 1774

present claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

It is the examiner's position that it would require undue experimentation to determine the full scope of devices within the scope of the present claims that limit pixel shrinkage.

Based on the present disclosure, the shrinkage properties of a pixel are affected not only by the specific phosphorescent emissive material that is used, but also by other components of the pixellated device, such as materials in physical contact with the phosphorescent material.

There are a variety of phosphorescent emissive materials, and a variety of auxiliary materials that may be in physical contact with the emissive material. Applicant's examples are insufficient to demonstrate any predictability in selecting phosphorescent emissive materials and combinations of emissive and auxiliary materials that would provide devices meeting the shrinkage limitations of the present claims.

5. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Art Unit: 1774

6. Claims 5, 7-11, 13-15, 17-25, 39 and 44 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 5-10, 12-14, 16-24, 36 and 41 of copending Application No. 10/829,011. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 6 and 26-28 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5, 16, 17, 20 and 25 of copending Application No. 10/829,011. Although the conflicting claims are not identical, they are not patentably distinct from each other.

The device as claimed in present claim 6 is fully within the scope of the device of copending claim 5. The device as claimed in present claim 26 is fully within the scope of the device of copending claims 16 and 20. The device as claimed in present claim 27 is fully within

Art Unit: 1774

the scope of the device of copending claims 16, 17 and 20. One of ordinary skill in the art at the time of the invention would have been motivated to make various specific compounds within the scope of the emissive material required for the device of the copending claims in order to provide various devices within the scope of the copending claims.

The device as claimed in present claim 28 is generic for the device of copending claim 25. See *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967). Present claim 28 requires a phosphorescent emissive material of formula I<sub>a</sub>, II<sub>a</sub> or III<sub>a</sub> wherein M is a metal atom whereas copending claim 25 requires a phosphorescent emissive material of formula I<sub>a</sub>, II<sub>a</sub> or III<sub>a</sub> wherein M is Ir.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Applicant's arguments filed June 13, 2005 have been fully considered but they are not persuasive with respect to the issues set forth in this action.

Regarding the objection to the disclosure, the examiner understands how the devices are tested, in general, for shrinkage. Based on applicant's response, it appears that either a single device provided the three sets of data points for Ir(ppy)<sub>3</sub>, or three identical devices provided the three sets of data points. It is not clear how a single device can provide three different sets of data points, or why three identical devices provide three different sets of data points if all are tested under the same conditions. Further clarification is required.

Art Unit: 1774

Regarding the provisional rejection under 35 U.S.C. 101, applicant states that a Terminal Disclaimer will be filed upon receipt of an indication of allowable subject matter in the present claims. Applicant is respectfully requested to note that the filing of a terminal disclaimer cannot overcome a rejection under 35 U.S.C. 101. Applicant must either cancel one set of conflicting claims, or amend the conflicting claims so as not to be coextensive in scope. (If all issues other than the provisional rejection under 35 U.S.C. 101 are resolved, the provisional rejection will be dropped in one of the applications and maintained in the other in accordance with MPEP 822.01. Generally, the provisional rejection is dropped in the earlier filed application, which is the copending '474 application.)

10. Miscellaneous:

Claim 11 is a substantial duplicate of claim 9.

Claims 22, 23, 26 and 39 are missing the period that was at the end of the original claims.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tada (US 2003/0030370 A1) disclose pixellated EL devices, teach that a photoresist may be used to define pixels, disclose pixel sizes within the scope of the present claims, and teach that iridium complexes may be used as an emissive material in the devices. Tada do not disclose any specific chemical structure for the iridium complexes.



Yu et al. (US 2004/0094768 A1) disclose pixellated EL devices, teach that a photoresist may be used to define pixels, disclose pixel sizes within the scope of the present claims, and teach that cyclometallated complexes of Ir or Pt may be used as an emissive material in the devices. Yu et al. incorporate WO 02/02714 by reference as disclosing typical cyclometallated complexes that can be used. Compounds 1-a through 1-l and 1-q through 1-v as defined in Table 1 on pages 6-7 of WO 02/02714 are compounds of formula VII as defined in present claim 5. However, Yu et al. teach that the pixels may be defined using materials other than a photoresist, and it is not clear whether the examples that utilize an iridium complex also comprise a photoresist grid to define the pixels.

Yamazaki et al. (US 6,822,629 B2) disclose pixellated EL devices. While Yamazaki et al. disclose using a photoresist material to define the pixels, it appears that the photoresist material does not remain in the final product. In addition, the only phosphorescent emissive materials specifically disclosed by Yamazaki et al. are PtOEP and Ir(ppy)<sub>3</sub>, neither of which meet the limitations of the emissive material required by the present claims.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 1774

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY  
August 15, 2005



MARIE YAMNITZKY  
PRIMARY EXAMINER

1774